

# **Safeguarding California:**

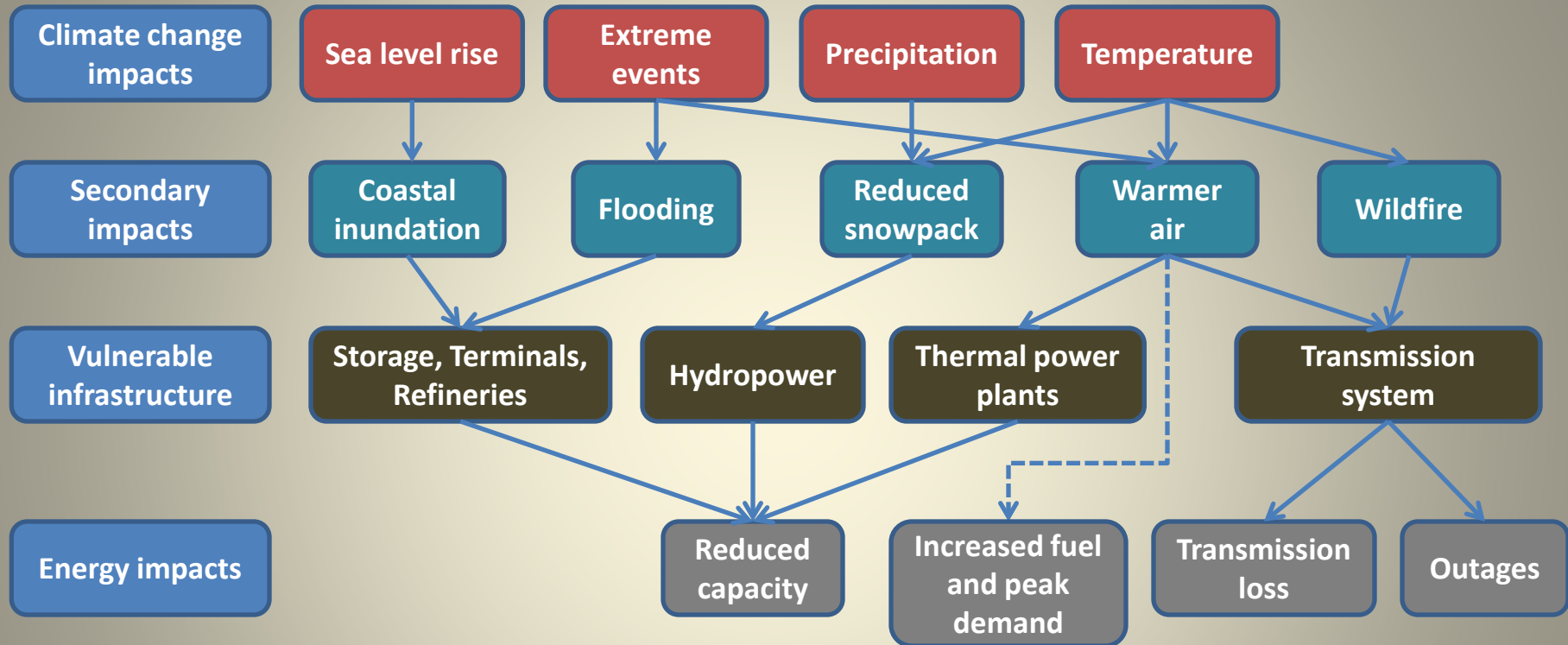
## **Preparing for Climate Risks**

*An Update to the 2009 Adaptation Strategy*

### **Energy Sector**

California Energy Commission

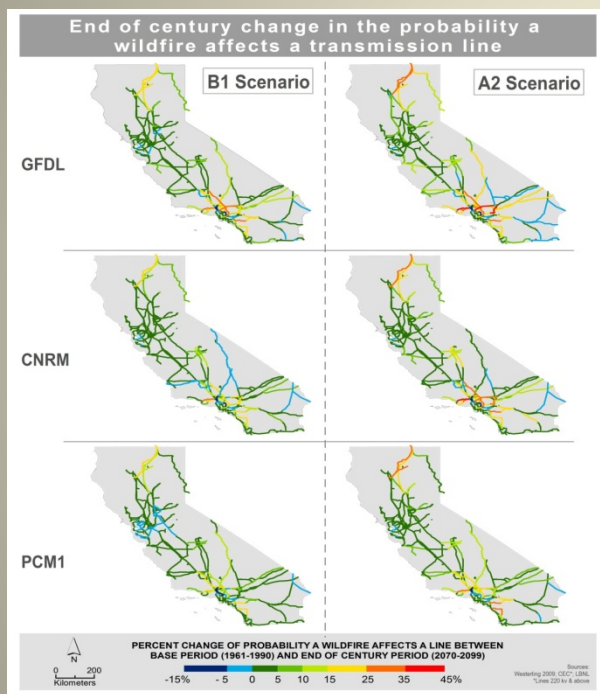
# Energy Sector Vulnerability



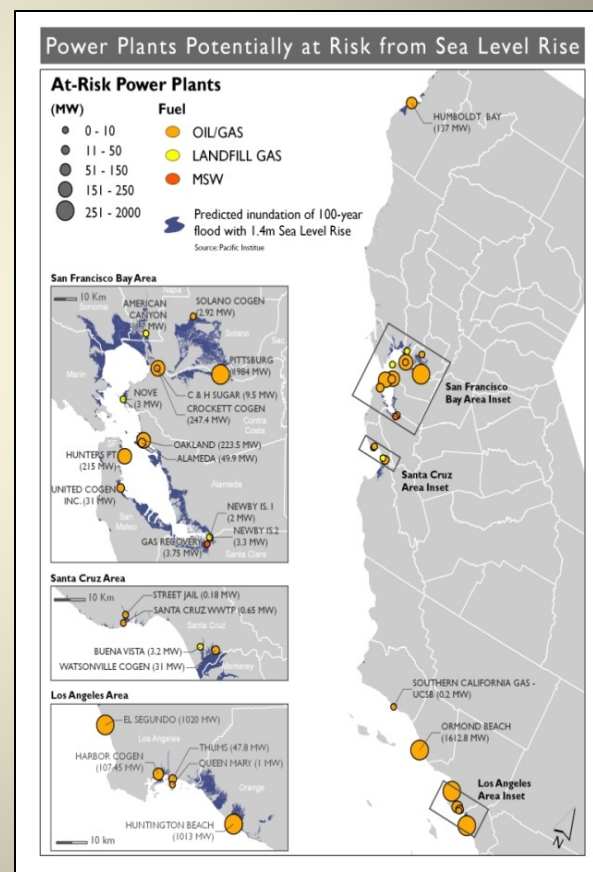
**The energy sector is changing rapidly which represents an opportunity to design a system that is less vulnerable to climate impacts**

# The Energy Sector is Vulnerable

Wildfires would affect transmission lines



Coastal energy units would be more vulnerable to flooding



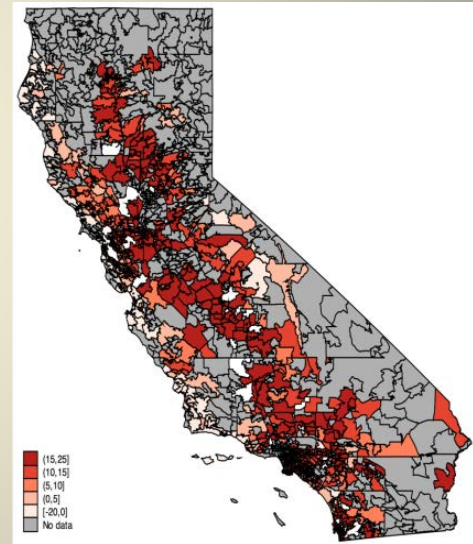
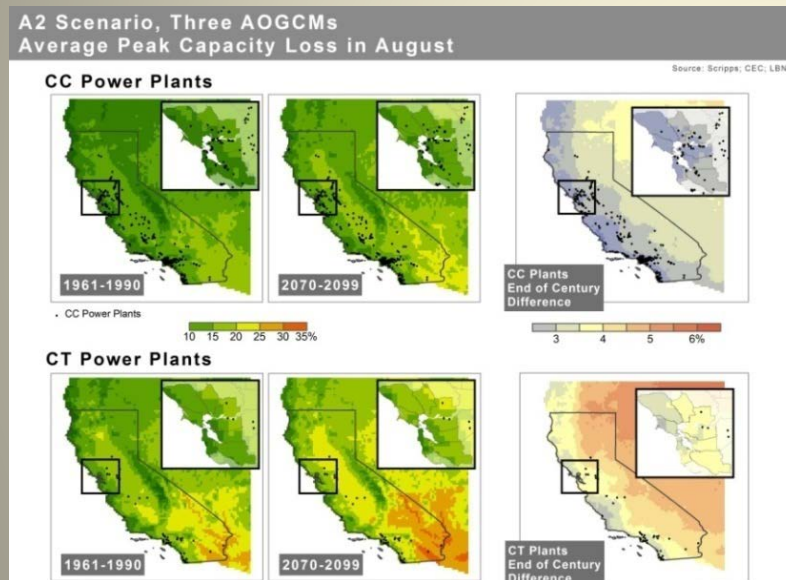
Estimating Risk to California Energy Infrastructure from Projected Climate Change

Publication Number: [CEC-500-2012-057](#)

# The Energy Sector is Vulnerable

High temperatures reduce the outputs from thermal power plants

Higher temperatures increase electricity demand

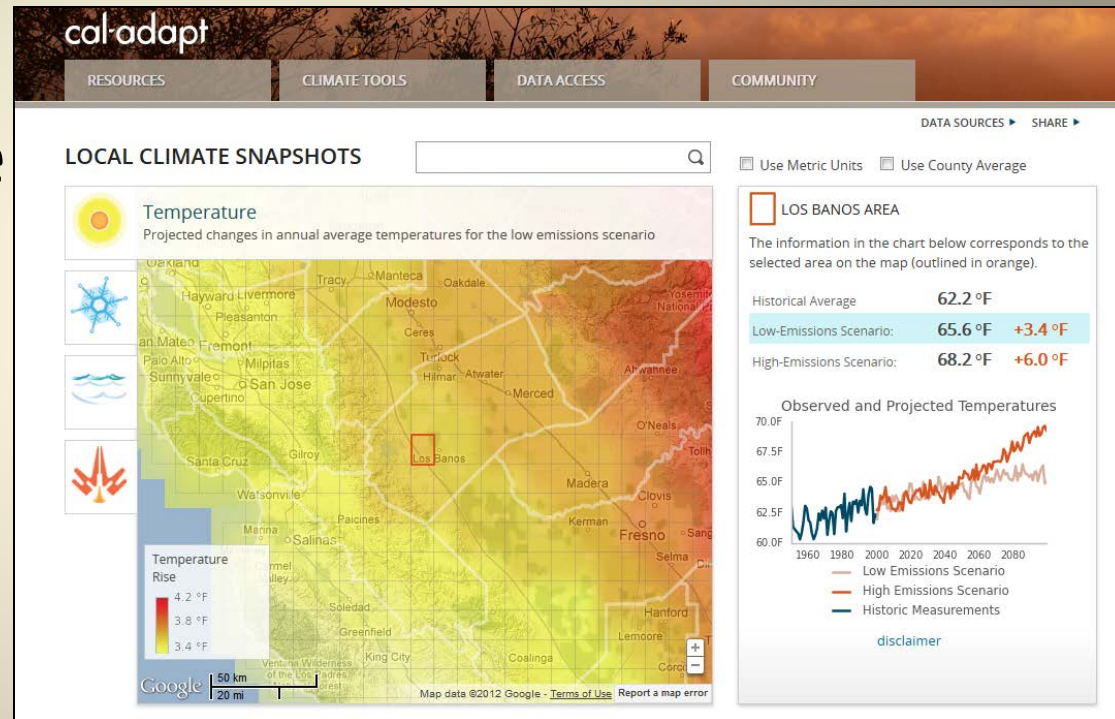


What is being done?  
Some examples



# Climate Scenarios

- Communicating the risks of climate change to citizens and local governments through Cal-Adapt



# Consider Climate Change in Energy Planning

- Considered higher temperatures due to climate change in the official energy forecasts produced by the Energy Commission
- CPUC and Energy Commission strongly support energy efficiency and demand response programs

# Diversify Energy Supply

- Diversify energy supply to reduce vulnerability to extreme weather related events and climate change
  - Permitted over 19,000 megawatts of renewable energy from 2010-2012
  - Created the Desert Renewable Energy Conservation Plan
  - Implemented several programs to help spur distributed generation and on-site renewable energy generation systems
  - Demonstrated the capability of microgrid and smart grid technology



# Support Energy-Related Research

- Assessed the impacts of climate change on the electricity system
- Currently investigating the vulnerability of the natural gas infrastructure in the Delta to sea level rise

**Questions?**